

**DISCOPYGIELLA, A NEW GENUS OF DOLICHOPODIDAE
FROM MEXICO**

(DIPTERA)

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The genus and four species described in this paper were collected by the author during recent trips to Mexico. The small size and the habit of remaining close to moist rock surfaces might explain the apparent lack of previous collections.

Discopygiella, gen. nov.

Small, yellowish or brownish, with setae mostly dark. Face narrower below, wider in the female, bearing hairs below in the female and sometimes in the male; front broad, broader above; face and front with blackish ground color; antenna with all segments short, first bare above, second slightly produced in the middle of the distal margin, third segment short and broad, with the arista borne in a shallow apical or subapical sinus; setae of the lower orbit pale. Thorax rather flattened on the posterior slope; acrostichals small, biseriate; five large dorsocentrals; scutellum with a pair of large bristles and numerous marginal hairs; propisternum bare above, a few pale setae below. Fore- and middle coxae with numerous hairs on the anterior surface, longer setae on the forecoxa distally, all coxae with a bristle toward the outer side; middle and hind femora with a pre-apical bristle; foretibia with short stout anterodorsals forming a crest along the distal two-thirds, hind tibia with short stout posterodorsals forming a crest along the distal three-fifths; tarsi plain. Wing rather oblong-oval, slightly tinged with brown, veins brown; third and fourth veins rather straight and parallel beyond the posterior crossvein, second vein usually slightly diverging; crossvein perpendicular to the last of the fourth vein, about two-thirds as long as the last of the fifth vein; sixth vein represented by a slight fold. Calypter pale with the margin and crest of long setae black; halter pale or slightly infuscated. Abdomen about as long as the thorax, stout, blunt, and rather compressed. Hypopygium discoid, capping the broad tip of the abdomen; tip bearing a short straight dark arm and a pale pubescent, short appendage.

Type species, *Discopygiella setosa* sp. n.

The genus closely resembles *Peloropecodes* Wheeler but is distinguished by the discoid hypopygium with only small appendages, the distinctly biseriate row of acrostichals, the somewhat produced distal margins of the second antennal segment, the setae on the lower part of the face, the lack of a modified claw on the last joint of the foretarsus, and the complete lack of specialized setae on the tip of the middle coxa.

The following key will distinguish the four known species:

1. Tibia II with two strong posterodorsals, tibia III with two pairs of dorsals and a ventral on the basal half; face with two pairs of setae on or above the suture, uppermost very small *D. setosa* new species
- Tibia II with only one strong posterodorsal, tibia III with anterodorsal and often the ventral near the middle lacking; face with only one pair of setae on or above the suture, face of male sometimes bare 2

2. Tibia III with a strong ventral near the middle; thorax, especially the pleura usually partly yellowish; third antennal segments of the male with a slight short point *D. discolor* new species
 Tibia III without strong ventral; thorax wholly dark; third antennal segment rounded apically 3
3. Antenna mostly yellowish; tibia II with a small posterodorsal near the middle, tibia III with a very indistinct ventral near the distal third; face of the male bare *D. xerophila* new species
 Antenna mostly blackish; tibia II without a posterodorsal near the middle, tibia III without a ventral; face of the male with a single pair of setae below *D. chiapensis* new species

***Discopygiella setosa* sp. n.**

Male.—Length 1.7 mm; wing 1.8 mm by 0.7 mm.

Face about half as wide below as above, with two pairs of setae on or just above the suture, the upper pair very small, ground color nearly obscured by grayish-brown pollen; pollen on the front brown. Palpus black with a black apical seta; proboscis brownish-yellow. Antenna blackish, third segment blunt, bulging more below the subapical arista than above.

Thorax black with thin brown pollen, thicker grayer pollen on the pleura.

Legs mostly pale with the bases of the coxae and sometimes parts of the femora slightly infuscated, distal joint of the tarsi brownish; foretibia with crest of about nine short stout anterodorsals, a small posterodorsal near the middle; middle tibia with large antero- and posterodorsals paired near the basal fourth and just beyond the middle, with four apicals; hind tibia with a large antero- and posterodorsal paired near the basal fifth, a large antero- and posterodorsal and a ventral near the second fifth, crest from the second large posterodorsal to the tip rather prominent, four apicals. Length of the joints of the foretarsus from the base as 12-5-4-3-4; middle tarsus as 14-8-6-4-4; hind tarsus as 7-10-7-5-5.

Abdomen dark brown or black, usually slightly flaring on the lower hind margin; hypopygial capsule brown with grayish pollen.

Female very similar to the male with the face only slightly narrower below.

Holotype male and three male paratypes, from calcareous rock wet from seepage, partly shaded small ravine, a few miles south of Tamazunchale, San Luis Potosí, Dec. 22-23, 1961; allotype female, four male and three female paratypes, from wet rocks by small roadside waterfall, above Valle Nacional, Oaxaca, Dec. 20, 1962; seventeen male and eleven female paratypes, from wet rocks by various small roadside waterfalls, above Valle Nacional, Oaxaca, May 12-16, 1963; two male and two female paratypes; from wet rocks by waterfall about 20 miles south of Pichucalco, Chiapas, May 24, 1963. Holotype and allotype in the U.S. National Museum (No. 67151), two male and two female paratypes at the Instituto de Biología, Ciudad Universitaria, Mexico, D.F., others in the author's collection.

The setae of the face and legs are more fully developed in this species than in the remaining three. Fortunately the distinctive chaetotaxy of the legs of each species is shared by both sexes.

***Discopygiella chiapensis* sp. n.**

Male.—Length 1.7 mm; wing 1.7 mm by 0.6 mm.

Face about a third as wide below as above, with a single pair of setae just above the suture, ground color obscured by yellowish-gray pollen; pollen on the front brownish-gray. Palpus black with a black apical seta; proboscis brownish-yellow. Antenna blackish, third segment blunt, bulging more below the subapical arista.



Fig. 1, *Discopygiella setosa* sp. n., male, with a hypopygium shown separately. Line represents 1 mm.

Thorax black with greenish tinges, with thin brown or gray pollen, thicker gray pollen on the pleura.

Legs including coxae pale, distal joint of the tarsi appearing darker; foretibia with a crest of eight or nine anterodorsals, the second to fourth often very small; middle tibia with a large antero- and posterodorsal paired near the basal fourth, a large anterodorsal just beyond the middle, with four apicals; hind tibia with a small posterodorsal and a slightly larger anterodorsal paired near the basal fifth, a large posterodorsal near the second fifth, posterodorsal crest rather distinct, four apicals. Lengths of the joints of the foretarsus from the base as 11-5-4-3-4; middle tarsus as 13-7-6-4-4; hind tarsus as 7-11-7-5-4.

Abdomen dark brown or black, usually slightly flaring on the lower hind margin; hypopygial capsule brown with grayish pollen.

Holotype male, from moist cement in spillway of small sluice gate, in the Botanical Garden, Gutierrez Tuxtla, Chiapas, May 23, 1963; three male paratypes, on moist rock by shaded stream, near road above Arriaga, Chiapas, May 22, 1963. Holotype in the U.S. National Museum (No. 67152), one paratype at the Instituto de Biología, Ciudad Universitaria, Mexico, D.F., others in the author's collection.

***Discopygiella xerophila* sp. n.**

Male.—Length 1.6 mm; wing 1.7 mm by 0.6 mm.

Face about a fourth as wide below as above, without setae, ground color obscured by grayish-brown pollen; pollen on the front dense, brown. Palpus black with a black apical seta; proboscis brownish-yellow. Antenna mostly deep reddish-yellow, third segment rounded apically, arista subapical.

Thorax black with dense brown pollen, grayish pollen on the pleura.

Legs including coxae pale, distal joint of the tarsi appearing darker; foretibia with a crest of nine anterodorsals, the second to fourth very small; middle tibia with a large antero- and posterodorsal paired near the basal fourth, a large anterodorsal and a very small posterodorsal paired just beyond the middle, with four apicals; hind tibia with a small posterodorsal and a slightly larger anterodorsal paired near the basal fifth, a large posterodorsal near the second fifth, posterodorsal crest rather weak, a very small indistinct ventral near the middle, four apicals. Lengths of the joints of the foretarsus from the base as 11-6-4-3-3; middle tarsus as 13-7-5-4-4; hind tarsus as 7-11-7-5-5.

Abdomen dark brown or black, usually not flaring on the lower hind margin; hypopygial capsule brown with grayish pollen.

Female very similar to the male with the face near half as wide below as above, having a pair of large setae on or just above the suture and one or two small setae on the clypeus.

Holotype male and one male paratype, from cement at edge of stagnant pool, in shaded ravine behind large culvert, near km 660 on rt. 190, Oaxaca, Aug. 9, 1962; allotype female and one male paratype, from moist cement in spillway of small sluice gate, in the Botanical Garden, Gutierrez Tuxtla, Chiapas, May 23, 1963. Holotype and allotype in the U.S. National Museum (No. 67153), one paratype at the Instituto de Biología, Ciudad Universitaria, Mexico, D.F., other paratype in the author's collection.

The two collection sites for *Discopygiella xerophila* are in the relatively dry valleys of central Oaxaca and Chiapas. This is in particularly sharp contrast to *D. setosa* which is apparently restricted to the moist slopes facing the eastern Gulf coast.

***Discopygiella discolor* sp. n.**

Male.—Length 1.7 mm; wing 1.7 mm by 0.6 mm.

Face very narrow below, less than a fourth as wide as above, without setae, ground color obscured by grayish-brown pollen; front with thin brown pollen. Palpus brown with a dark apical seta; proboscis yellow. Antenna usually yellowish but sometimes brown, third segment with a short point, arista subapical.

Mesoscutum usually pale brown with thin brown pollen, usually sides of mesoscutum and most of pleura yellowish.

Legs including coxae pale, distal joint of the tarsi appearing darker; foretibia with a crest of seven or eight anterodorsals, second and sometimes third very small; middle tibia with a large antero- and posterodorsal paired near the basal fourth, a large anterodorsal and sometimes a very small posterodorsal just beyond the middle, with four apicals; hind tibia with a rather large anterodorsal and a small posterodorsal near the basal fifth, a large posterodorsal and a large ventral near the second fifth, posterodorsal crest weak and sometimes indistinct, four apicals. Lengths of the joints of the foretarsus from the base as 10-6-5-3-4; middle tarsus as 13-7-6-5-4; hind tarsus as 7-9-7-5-5.

Abdomen dark brown or black with the basal sterna usually paler, usually flaring on the lower hind margin; hypopygial capsule brown with grayish pollen.

Female very similar to the male, but the lower part of the face nearly half as wide as above, bearing a pair of setae near the suture, one or two smaller setae on the clypeus; the third segment of the antenna blunt.

Holotype male, allotype female, four male and seven female paratypes, from rock face moist from seepage, above roadside spring, just north of Chapulhuacan, Hidalgo, Aug. 13, 1962; one female, same site, Aug. 5, 1962; one male and one female, from wet rocks by small roadside waterfall, above Valle Nacional, Oaxaca, Dec. 20, 1962; eleven males and one female, from wet rocks by various small roadside waterfalls, above Valle Nacional, Oaxaca, May 13-16, 1963; one male and one female, on moist rock by shaded stream, near road above Arriaga, Chiapas, May 21, 1963; one male, on moist rock by stream, in shaded ravine, near Tierra Colorado, Guerrero, May 29, 1963. Holotype and allotype in the U.S. National Museum (No. 67154), two male and two female paratypes at the Instituto de Biología, Ciudad Universitaria, Mexico, D.F., others in the author's collection.

The species shows the widest distribution of the four, occurring on both the eastern and Pacific slopes. The specimens from near Tierra Colorada and Arriaga on the Pacific slope have the thorax wholly dark and the posterodorsal crest of the hind tibia very indistinct, but show all essential characters of the species.